

SMELYANSKIY, Matvey Yakovlevich; GUTERMAN, Kirill Davydovich;
BOYARSHINOV, V.A., kand. tekhn.nauk, retsenzent; TRACHEV,
L.G., inzh., red.; YEMZHIN, V.V., tekhn. red.

[Design and operation of vacuum arc furnaces] Rabochii protsess
i raschet vakuumnykh dugovykh pechei. Moskva, Gosenergoizdat,
1962. 111 p. (Biblioteka elektrotexnika, no.12)

(MIRA 15:11)

(Electric furnaces--Design and construction)
(Vacuum metallurgy)

SMELYANSKIY, Matvey Yakovlevich; BOYARSHINOV, Vladimir Arkad'yevich;
GUTERMAN, Kirill Davidovich; TKACHEV, Leonid Grigor'yevich;
TSISHEVSKIY, Vsevolod Petrovich; YEZDOKOVA, M.L., red. izd-
va; ISLENT'YEVA, P.G., tekhn. red.

[Vacuum arc furnaces and electronic melting plants] Dugovye
vakuumnye pechi i elektronnye plavil'nye ustanovki. Moskva,
Metallurgizdat. 1962. 210 p. (MIRA 16:2)

(Electric furnaces) (Vacuum metallurgy)

(Electronic apparatus and appliances)

GUTERMAN, M.

"The main problems in the rough cutting of lumber in sawmills", p. 101 (Analele Romano-Sovietice. Seria Silvicultura-Industria Lemului Si A Hartiei., Series a II-a, v. 7, no. 15, Sept/Oct. 1952 Bucuresti)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol. 2, No 9, Library of Congress, September 1953, Uncl.

ZAKS, G.; GUTERMAN, M.

Bank control over individual housing construction. Fin.SSR 21
70-74 My '60. (MIRA 13:7)
(Housing--Finance)

GUTERMAN, M. B., and LOZINSKIY, M. G.

"High Heat Stable Indentors for Measuring the Hardness of Metals When Heated to $1,300^{\circ}$ in a Vacuum," by M. G. Lozinskiy and M. B. Guterman, Institute of Machine Science, Academy of Sciences USSR, Zavodskaya Laboratoriya, Vol 22, No 11, 1956, pp 1358-1363

Present methods used in measuring the hardness of metals and alloys are based on indentation. For extending the temperature range of the tests and increasing the longevity of the indenter tips it was necessary to find new materials capable of replacing the technical diamonds being used. As the result of many comparative tests, synthetic corundum (artificial sapphire) tips were found to be most suitable for measuring alloy hardness at temperatures up to $1,300^{\circ}$, under vacuum.

Schematic drawings of a diamond-tipped indenter and a sapphire-tipped indenter used in the tests are shown. Photomicrographs of the imprints of both type tips on test metals supplement the text.

Sam 1258

GUTERMAN, M. B.

24-9-7/33

AUTHORS: Antipova, Ye. I., Guterman, M. B. and Lozinskiy, M. G.
(Moscow)

TITLE: Certain features of polymorphous β to α transformation of pure (iodide) titanium. (Nekotoryye osobennosti polimorfnoego $\beta \rightarrow \alpha$ -prevrashcheniya chistogo (iodidnogo) titana).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.9, pp.45-49 + 6 plates (USSR)

ABSTRACT: Until very recently very little information has been published on direct observations of the polymorphous transformation of titanium and no detailed information was available on the kinetics of this process, the exception being a paper by Lozinskiy, M.G. (Ref.7). Such direct observations at elevated temperatures can only be carried out by heating in vacuum with a residual pressure of 10^{-5} to 10^{-6} mm Hg (Ref.8). In this paper the experiments are described which were carried out by the authors at the Institute of Mechanical Engineering, Ac.Sc. USSR (Institut Mashinovedeniya AN SSSR) on titanium containing various small additions of iron, silicon, aluminium and carbon, as specified in the table, p.45. The experiments

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24-9-7/33

Certain features of polymorphous β to α transformation of pure (iodide) titanium.

were carried out by means of methods and equipment described in the book "High Temperature Metallography" of Lozinskiy, M.G. and also by means of dilatometric tests in the temperature range from room temperature up to 1000°C. Titanium specimens of 6 x 2 x 60 mm were used, whereby the metallographic cut was made at the 60 x 6 mm surface. The graph, Fig.1, p.46, shows dilatometric curves for temperatures up to 1000°C and these show that α to β transformation starts at about 860 to 880°C and that β to α transformation proceeds at 900 to 880°C. Fig.2 shows a series of micro-photographs taken from the same surface of a specimen during heating for twenty minutes at 1050°C at a vacuum of 10^{-5} mm Hg. Fig.3 shows a series of micro-photographs of a specimen surface during β to α transformations in vacuum. Fig.4 shows a micro-photo of a "plane" crystal of α -titanium forming in the process of polymorphous transformation when investigating the micro-structure in vacuum; Fig.5 shows a micro-photo of a "plane" α -titanium crystal subjected to β to α transformation during cooling in vacuum. Fig.6 shows a martensite-like micro-relief during β to α transformation

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Certain features of polymorphous β to α transformation of pure
(iodide) titanium. 24-9-7/33

on a polished surface of a titanium specimen, whilst Fig.7 shows a micro-photo of a zone of coexistence of the original micro-structure of the iodide titanium specimen and of the micro-relief forming as a result of β to α transformation. By means of high temperature metallography methods, the different kinetics of growth have been elucidated of α -titanium crystals during polymorphous β to α transformation. It was established that the time of formation and growth of α -titanium crystals until reaching their final dimensions may exceed $1/16$ sec and may also continue at a rate of $0.8-1.2^\circ/\text{sec}$. In individual cases an additional growth of the α -titanium crystals with an average rate of 0.06 to $0.08^\circ/\text{sec}$ was observed during the polymorphous transformation. The here described schemes illustrate the causes of observation of differing kinetics of growth on the α -titanium grains observed on the specimen surfaces.

There are 9 figures, 1 table and 9 references, 6 of which are Slavic.

SUBMITTED: May 24, 1957.

AVAILABLE: Library of Congress.

Card 3/3

GUTERMAN, M. B.

24-1-2/26

AUTHORS: Guterman, M.B., Dron', N.A., Lozinskiy, M.G., and
Teumin, M. I. (Moscow).

TITLE: Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys. (Odnovremennoye primeneniye rentgeno- i mikrostrukturnogo analizov dlya izucheniya protsessov deformatsii nagretykh metallov i splavov).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, No.1, pp. 11-20 + 2 plates (USSR)

ABSTRACT: In studying the kinetics of the process of deformation of metals and alloys within a wide range of temperatures and deformation speeds it is of great scientific and practical interest to investigate simultaneously the changes in the micro-structure of the material and the distortions of the crystal lattice caused by stresses of the first and second type by using X-ray methods. Apparatus developed by the Institute of Engineering Technology, AS USSR (Institut Mashinovedeniya AN SSSR) and described in earlier papers (Refs. 1-3) enables observation directly under a microscope and on photographs of the microstructure of metals and alloys during the process of heating up to 1100°C applying simultaneously tensile

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Simultaneous application of X-ray and micro-structural analyses
for studying the processes of deformation in heated metals and alloys.

stresses of 0 to 60 kg/mm². Observation of the micro-structure during tensile stresses permits only seeing the results of sliding processes and of viscous displacement along the boundaries of the grains and the blocks. The micro-relief forming thereby on the polished surface of the specimen reflects the occurring changes in the micro-structure. It is particularly important to emphasize that these changes are due to processes which in most cases are irreversible and take place in volumes of the order of one or several grains. Processes preceding deformation cannot be investigated by micro-structural analysis but only by X-ray structural analysis, namely, by measuring the period of the crystal lattice for determining the magnitude of the internal stresses of the first type (elastic as well as residual) and also for determining the distortions in the crystal lattice caused by type II stresses. For obtaining a clear picture characterizing the stress state on the basis of X-ray diffraction patterns from individual crystallites, it is necessary to use a sharp X-ray beam. This can be

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24-1-2/26

Simultaneous application of X-ray and micro-structural analyses for studying the processes of deformation in heated metals and alloys.

containing 7% Mo at 600°C in vacuum. The results of these investigations are graphed in Fig.7. Micro-photographs and X-ray diffraction patterns produced during these experiments are shown in Figs.8 and 9. The simultaneous X-ray structural and micro-structural investigations of the process of deformation of heated materials with the here described equipment using the new, sharp beam X-ray tubes (which permit reducing the exposure time to 1.5 to 2 minutes) opens up extensive possibility of studying the relations governing the softening of metals and alloys. There are 9 figures and 4 references, all of which are Russian.

SUBMITTED: August 26, 1957.

ASSOCIATION: Institute of Engineering Technology, Ac.Sc. USSR.
(Institut Mashinovedeniya AN SSSR).

AVAILABLE: Library of Congress.

Card 5/5

SOV-129-58-6-2/17

AUTHORS: Lozinskiy, M. G. (Dr. of Tech. Sci.), Guterman, M. B. and Antipova, Ye. I. (Engineers)

TITLE: Micro Nonuniformity of Deformation of Metals during High Temperature Heating (Mikroneodnorodnost' deformatsii metallov pri vysokotemperaturnom nagreve)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 6, pp 6-9 and 4 plates (USSR)

ABSTRACT: Oding and Ivanova (Ref.1) have shown that in the volume of specimens subjected to tension at room temperature and at elevated temperature the speed of expansion differs in the individual local sections of sizes of about 10 mm. In this paper information is given on the relations governing the kinetics of nonuniform deformation in the micro volumes at temperatures above and below the equicohesion temperature, i.e. under regimes at which the grain boundaries are respectively weaker or stronger than the body of the grain. The experiments were effected on equipment developed by the Institute of Machinery, Academy of Sciences, USSR. A valuable feature of this equipment is the possibility of direct observation under the microscope and photographing of the micro structure of the surface of the

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BOV-129-58-6-2/17

Micro Nonuniformity of Deformation of Metals during High Temperature Heating.

studied specimens when heating up to 1100°C during the process of deformation under tension in vacuum. For measuring the micro hardness a series of indentations by a diamond pyramid were made in the longitudinal direction of the specimen with spacings of about 0.05 to 0.1 mm; these indentations were viewed with a microscope with a magnification of 200 times. During the tests one and the same section of the surface of the specimens was continuously observed and photographed and the produced series of micro photographs permits comparison of the nonuniformity of the deformation and of the individual micro volumes of the specimen. The accuracy of measurement was 0.05%. Figs. 2 and 3 (plates) show two series of micro photographs made of the same section of the surface of annealed specimens of a single phase nickel-molybdenum alloy, with 7% Mo, during heating and tensile stressing in a vacuum of about 10^{-5} mm Hg col. In Fig. 4 the deformation is graphed of the

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JOV-129-58-6-2/17

Micro Nonuniformity of Deformation of Metals during High Temperature Heating.

individual micro sections and of the entire zone during the tests of the specimens, the micro photographs of which are shown in Fig.2. In Fig.5 the deformation curves are graphed of micro sections and of the entire zone during testing of a specimen, micro photographs of which are given in Fig.3. Fig.6 shows the micro structure of a specimen of a homogenized ageing alloy of iron with 12 wt.% Mo after being subjected to tensile stresses of 40 kg/mm^2 at 450°C for 2 hours. In Fig.7 the relative changes of the dimensions of the diagonals of the square indentations (shown in Fig.2), by the diamond pyramid, on the specimen surface are graphed. Fig.8 shows the micro structure of the surface of a specimen of Fe-Mo alloy (12 wt % Mo) after being subjected to a tensile stress of 40 kg/mm^2 at 450°C for 2 hours in vacuum. The here described experimental results have enabled for the first time the recording of the kinetics of the nonuniform process of deformation in micro volumes in a wide temperature range by direct observation. Thereby the non-uniformity observed earlier in relatively larger volumes of lengths of 1 - 10 mm (Ref.1), was considerably more pronounced in sections of dimensions from 50μ onwards.

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SOV-129-58-6-2/17

Micro Nonuniformity of Deformation of Metals during High Temperature Heating.

Furthermore, within a single grain, the magnitude of deformation evaluated by distortion of the indentations on the specimen and the change in the spacing of these indentations varies very considerably. There are 8 figures (4 of them plates) and 5 references, of which 4 are Soviet and 1 English.

ASSOCIATION: Institut Mashinovedeniya AN SSSR (Institute of Machinery, Academy of Sciences USSR)

1. Metals - Deformation
2. Metals - Temperature effects
3. Metals - Test methods

Card 4/4

GORELIK, S.S., dots., kand. tekhn. nauk; GUTERMAN, M.B., inzh.

Mechanism of recrystallization during the critical stage of deformation. Sbor. Inst. stali no.38:536-547 '58. (MIRA 11:8)

1. Kafedra metallofiziki i rentgenografii Moskovskogo instituta stali im. Stalina.

(Crystallization) (Deformations (Mechanics))

L 14998-66

ACC NR: AP5028563

(N)

SOURCE CODE: UR/0126/65/020/005/0733/0740

IJP(c) JD/HW/JG

AUTHOR: Guterman, M. B.; Mirkin, I. L.; Pavlyuk, A. A.; Pervakov, V. A.; Petrenko, N. S.; Khotkevich, V. I.

ORG: TsNII of Technology and Machine Building, Moscow (TsNII tekhnologii i mashino-stroyeniya); Kharkov gosuniversitet im. A. M. Gor'kiy (Khar'kovskiy gosuniversitet)

TITLE: Certain features connected with the K-state in Ni-Cr, Ni-Cr-Mo and Fe-Ni-Cr-Mo alloys

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 5, 1965, 733-740

TOPIC TAGS: metal physics, ordered alloy, mechanical property, resistivity, non-ferrous metal alloy, ferrous alloy, metal heat treatment, heat resistant alloy, high temperature strength, metal hardening

ABSTRACT: Changes in electrical resistivity in Ni + 15% Cr, Ni + 15% Cr + 18% Mo and Fe + 25% Ni + 16% Cr + 6% Mo alloys were studied as a function of low temperature deformation (from +20° to -196°C) and annealing rate (from 2 to 10⁵ deg/min). Decomposition of the K-state in the alloys was observed. The effect of the K-state on high temperature strength was also noted. The K-state causes microscopic inho-

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UDC: 539.4.015

L 14998-66

ACC NR: AP5028563

homogeneities which retard the motion of dislocations. In this work, the influence of the decomposition of the K-state was studied in terms of high temperature strength. The temperature dependence of electrical resistivity was obtained as a function of temperature and heating rate. For each alloy, the resistivity increased initially and at 500°C reached a peak, whereupon it dropped to a minimum (about 700° to 900°C depending on the alloy) and rose again. The drop in resistivity was associated with the decomposition of the K-state. Deformation by compression (60 to 70%) in the temperature interval from -196 to +20°C showed that the decomposition of the K-state was practically independent of deformation temperature. At higher temperatures (between 500° and 1000°C) and at high rates of heating, the decomposition of the K-state was studied by increasing the heating rate to 10⁶ deg/min. The interval for the maximum decomposition was displaced to higher temperatures (300 to 450° higher), depending on the type of alloy. In the K-state region a significant strengthening was also noted when the speed of deformation was increased from 0.03%/min to 0.3%/min, while in the region of K-state decomposition no effect on strength was apparent. For fast heating rates, the rise in strength was maintained at higher temperatures than for slow heating rates. In particular, for Ni-Cr this region was expanded to 700°C, while for the other alloys to 900 or 1000°C. Where the K-state was decomposed at room temperature, no additional strengthening occurred upon pulse heating. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: 06Aug64/ ORIG REF: 011/ OTH REF: 003

Card 2/2

Jan 10, 1954
Electrochemistry

BIKERTMAN, M. S.

Amalgam polarography. Study of the influence of gelatin and camphor on the anodic waves of amalgams. A. G. Stromberg and M. S. Guferman (A. M. Gorkij Ural State Univ., Sverdlovsk). *Zhur. Fiz. Khim.* 27, 933-1001 (1953); cf. *C.A.* 47, 11032b. — In amalgam polarography, the dropping liquid was a dil. amalgam of metal, M, and the aq. soln. in which the drops formed usually contained no ions of M. The potentials (E_a and E_c) of the half waves and the coeffs. k_a and k_c of the equation $\log [i/(I - i)] = \text{const.}$ kE (i = current strength, I = limiting current strength, E = drop potential referred to satd. Hg-HgCl electrode) were compared for the anodic polarization of amalgam drops (subscript a) and the cathodic polarization of Hg drops in a soln. of M (subscript c). The amalgam (in expts. a) and the soln. (in expts. c) usually were 0.0005-0.002N. For Zn amalgam in 0.1N KOH or zincate soln. in 0.1N KOH the difference between E_a and E_c was 0.32 v. Addn. of 0.1% gelatin (I) raised it to 0.58 v. and gave $k_a = 0.15$ and $k_c = 0.29$ instead of the theoretical value 0.030. For Cd in 0.1N KCl there was almost no difference between E_a and E_c and between k_a and k_c (0.033 - 0.040), and I had almost no effect. Apparently the I film adsorbed on the drop surface was permeable for small Cd^{2+} but impermeable for large ZnO_4^{2-} . In 0.1N KCl the difference between E_a and E_c was negligible also in the instances of Pb and Zn. Satn. of the soln. with camphor (II) produced $E_a - E_c$ of 0.82, 0.89, and 0.64 v. for Zn, Cd, and Pb, resp., and increased k_a and k_c to 0.06-0.18. II had no effect on the potential of non-polarized drops, but made E_a less and E_c more neg.; in both instances the half-wave potential was shifted toward the (pos. and neg., resp.) potential of desorption of II. The effect of II on the polarization of Sn amalgam in 4N HCl and that of Hg in 4N HCl + SnCl_4 was complicated. The wave corresponding to $\text{SnCl}_4^{2-} \rightarrow \text{Sn}$ was suppressed by II. Surface-active addns. also affected polarographic results by slowing down the movements of the drop surface.

J. J. Bikerman

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7-28-54

Classification: "Misconception of Language - Errors of Academic Disciplines or a Monologue."
Sov. Tech. Sci., Moscow Order of Labor Red Banner Pioneer Academic School isent. 1954,
31 May 54. Vechernyaya Moskva, Moscow, 21 May 54.

SO: SO 214, 26 Nov 1954

GUTERMAN, S.A.; RAYKHBAUM, Ya.D.

Using radioactive indicators for the investigation of spark discharges. Fiz.sbor. no.4:250-252 '58. (MIRA 12:5)

1. Irkutskiy nauchno-issledovatel'skiy institut Ministerstva
tavitnoy metallurgii.
(Electric sparks) (Radioactive tracers)

GUTERMAN, S. G.

C/1964

1964

METALLURGY

DECEASED

ACC NR: AP7001849

SOURCE CODE: UR/0021/66/000/012/1584/1587

AUTHOR: Huterman, V. H.--~~Guterman~~, V. G.

ORG: Institute of Geophysics, AN UkrSSR (Instytut geofizyky AN URSR)

TITLE: Fault zone influence on the value of elastic wave velocity

SOURCE: AN UkrSSR. Dopovidi, no. 12, 1966, 1584-1587

TOPIC TAGS: elastic wave, seismic sounding, geologic expedition, wave propagation

ABSTRACT: This paper shows that an anomalously low value of the velocity of longitudinal elastic waves is observed in the fault zone. Within the Rybaltsevs'kyi brachy-anticlinal fold (Dneprovsk-Donets depression) seismic logging has been conducted in six deep exploration holes. Analysis of longitudinal wave propagation in Upper Cretaceous deposits showed that in the structure under study the law of stratum velocity distribution established in a previous paper is observed, i.e., in closed structures these velocities are minimum and increase toward the periphery of the fold. There was an exception in certain Cretaceous deposits in a single borehole. These were Santonian-Turonian deposits. The paper discusses the anomalously low values here. It must be taken into account that the fault in these deposits in one of the boreholes is so close to the borehole with the low value that it affects the readings from the second hole. Elastic waves in general are smaller in this area and in similar ones. Dynamic loads which were generated in tectogenesis are not taken into consideration in their effect on the anomalous readings which seem to be

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ACC NR: AP7001849

attributable to the more discontinuous structure in the area. R. V. Herasymovych, L. K. Serheeva, Ya. N. Zaslavskyy, Ye. S. Dvoryanyn, I. M. Partola, and Ye. M. Slutyy took part in the Poltava geophysical expedition. Paper presented by S. I. Subbotin, Academician of AN UkrSSR. Orig. art. has: 2 tables and 2 figures.

SUB CODE: 08/ SUBM DATE: 05Jan66/ ORIG REF: 003

Card 2/2

GUREVICH, Y. A.

Relation between the layer velocities and the tectonics of two
anticline structures in the Onipen-Gonats Lowland, Georgia.
abstr. no. 8462468 '64. (MIRA 18:6)

1. Institut geofiziki AN USSR.

GUTERMAN, V. M., Engr. Cand. Tech. Sci.

Dissertation: "Electrolysis of the Solid Solution of Carbon in Iron." Central Sci Res
Inst of Technology and Machine Building - "TsNITMASH." 23 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17876)

GUTLERN, V. M.
25575

Elektroliz Austenita. V sb: Korroziya, zashchita ot korrozii i elektroliz.
M., 1948, s. 156-72.--Bibliogr: 5 Nazv.

SO: LETOPIS NO. 30, 1948

Electric charge of the carbon particles dissolved in γ -iron. T. A. Lebedev and V. M. Guterman. *Doklady Akad. Nauk S.S.S.R.* 60, 1201-3 (1948). —Deta. of the degree of ionization of C atoms dissolved in Fe was sought by measuring the transference u , $u = m/FA$ ($m = n$, g. at. C transferred, $F =$ Faraday, $A =$ quantity of electricity passed) in Aronco iron samples the middle part of which was cemented to a content of 1.20-1.25%, heated *in vacuo* by a d.c. to 900, 950, 1000, 1050, and 1100°, 8-20 hrs.; the total amt. of C transferred to the cathode is the sum of transfer by diffusion and by the elec. current, the amt. transferred to the anode is equal to the difference. Exptl. curves of u as a function of the temp. were compared with the formulas of Wagner (C.A. 26, 2007) and of Schwarz (C.A. 31, 8303) for various valences of the Cation. A valency $+1$ (C⁺) is definitely excluded; the assumption of C⁺⁺ gives fair agreement with Wagner's formula but not with that of Schwarz which, on the other hand, is in agreement with the exptl. curve for C⁺⁺ on the assumption of the Fe⁺⁺ ions; the curve constructed for C⁺ lies between the 2 Schwarz curves drawn on the assumption of Fe⁺⁺ and Fe⁺⁺⁺. Thus, while the evidence is not finally conclusive, it appears that C is present in the form of cations, and that its state of ionization lies in the neighborhood of C⁺⁺ or C⁺. N. Thon

N. Thon

GUTERMAN, V.M., kandidat tekhnicheskikh nauk; TENENBAUM, M.M., kandidat tekhnicheskikh nauk.

Correlation between microstructure and wear resistance of carbon steels during abrasive tests. Metalloved. i obr. met. no.11:15-23 N '56. (MLRA 10:1)

1. Vsesoyuznyy proyektno-tekhnologicheskii i eksperimental'nyy institut ugol'nogo mashinostroyeniya.
(Steel alloys--Testing)

TENENBAUM, M.M., kandidat tekhnicheskikh nauk; GUTERMAN, V.M., kandidat tekhnicheskikh nauk.

Investigating the wear resistance of steel in abrasive media.
Vest.mash.36 no.12:25-29 D '56. (MLBA 10:2)

1. Vsesoyuznyy proyektno-tekhnologicheskii i eksperimental'nyy institut ugol'nogo mashinostroyeniya.
(Tool steel--Testing) (Mechanical wear)

All-Union Tech. Planning & Experimental Inst

C. N. S. G.

All-Union Planning Technological + Experimental Inst of Coal Machinery

32-6-22/54

AUTHOR: Not given
 TITLE: Short Reports. (Korotkiye soobshcheniya, Russian)
 PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 706
 (U.S.S.R.)

ABSTRACT: V.M.GUTERMANN and V.B.MIKHIYENKO set up the following scale of microstructures for the control of the quality of the cemented layer of the following types of steel: 20kh, 12khN3A, 12kh2N4A, 18khGT and 20khGB according to various methods of technical treatment. The microstructure of the cemented layer is here compared with the mechanical qualities of the samples.

D.G.ZAYTSEV worked out a method for sorting out types of steel according to the amount of their thermoelectric driving force and in consideration of the C and Si content in the steel. A steel plate of 0,5 mm thickness is used as standard, and borings served as samples. On the basis of the results obtained by investigations the author expresses the opinion that purely bimetallic alloys represent a linear ratio between thermoelectric driving forces and the proportion of the alloy.

ASSOCIATION: Institute "Orguglyemash" and Turbine Factory of Kaluga.
 PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 1/1

GUTMAN, V.M., kand. tekhn. nauk

Low-carbon and low-alloy steels for the manufacture of high-strength welded conveyor chains of 18 gauge. Tekhn.ugol.razh. no.3:5-9 '59.
(MIRA 14:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnicheskii institut ugol'noy mashinostroyeniya. (Chains)
(Conveying machinery)

GUTERMAN, V.M., kand.tekhn. nauk.

Problems in designing of standardized chains. Tekhn.ugol.mash.
(MIRA 14:2)

1. Vvedeniye i issledovatel'skiy i proyektno-tekhnologicheskoy
institut ugol'noy mashinostroyeniya.
(Coal machinery) (Chains)

NOTATION BOOK I REVISED
B89E/A05

akademika nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya. Seminar po kachestvu poverkhnosti

**Elektrosvetkovnost i detaly mashin, sbornik 4. Tekhnologicheskaya
fabrika obrabotki. Metallogiya i priroda. Ekspluatatsionnyye
svetovozbuzhdeniya. (Surface Quality of Machine Parts). Lek-
tsionnyye artikuly. No. 4. Processing Factors in Machine
Metallogry and Instruments. Operational Properties of the Machine
Parts. Moscow, Izdat AN SSSR, 1959. 291 p. (Series: Test Study)
Larye slip inserted. 3,200 copies printed.**

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya.

Resp.: Ed.: P.Ye. D'yachenko, Professor; Ed. of Publishing House:
G.B. Gorabkov; Tech. Ed.: T.P. Polenova.

PURPOSE: This collection of articles is intended for technical personnel concerned with the quality of surface finishes of machine parts.

OVERVIEW: This collection of articles deals with problems of surface roughness and the effect of surface roughness on the wear and strength of machine parts. Among the topics discussed are the determination of surface roughness, the effect of surface roughness on the wear of machine parts, the effect of lubrication on the wear of plane friction surfaces, methods and instruments for measuring surface roughness, and the processing of profilograms following surface roughness measurements. The collection contains several of the articles.

Razveday, N.A., and A.A. Mikhaylov. Investigation of the Failure of Parts Due to Cracks Formed in Wrinding Chrome-Plated Surfaces. 204

September, I.S. Work Hardening by Hammering to Increase the Fatigue Strength of Machine Parts

Veronov, A.L. Effect of High-Frequency Cutting-Tool Vibrations on Surface Roughness in Turning 225

Wesley, L.A., Experience Gained From the Introduction of a Pneumatic Instrument for Checking Surface Roughness

Sukol'skiy, A.V. Principles of Controlling the Process of Finish Grinding with Floating Abrasive Sticks

Yermolin, B.P. Experience Gained at the Gor'kovskiy Avtozavod (Gor'kiy Automotive Plant) From the Introduction of GOST (All-Union State Standards) for Surface Roughness

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Deryagin, O.A.. Investigation of the Effect of Finishing Hole
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Chetanyan, L.A. Lubricating Properties of Polybismuth Disulfide 278

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ITALE: Library of Congress

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7-12-68
WJ/pw/jb

S/191/60/000/004/012/015
B016/B058

AUTHORS: Guterman, V. M., Kogan, A. M., Kotina, M. M.

TITLE: Application of Microstructural Analysis for Studying Glass-reinforced Plastics

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 58-66

TEXT: The authors report on their studies which were intended to clarify the applicability of microstructural analysis for testing glass-reinforced plastics (grp). The determination of the structure of this material is of importance for a random quality control of the finished products, for developing new types of grp, and for the improvement of their manufacturing methods. Studies conducted at the Department of Polymer Substances of the VNIPTUglemash (All-Union Scientific Research, Design, and Planning Technological Institute of Coal Machinery) showed that the most important structural factors influencing the strength of grp are revealed by microstructural analysis of polished sections. The authors studied: a) grp on the basis of glass fabric, furfurol resins, and binding agents of the type S Φ -2 (BF-2); b) "CDAM" ("SVAM") grp on the basis of orientated or crossed

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Application of Microstructural Analysis for
Studying Glass-reinforced Plastics

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glass sheets with BF-2 as binding agent; c) orientated grp from VNIPTUglemash, based on glass tow and polyester resin. The specimens were clamped between two metal plates, cut with a saw, smoothed with a rasp, and finally polished. Polished sections were studied under the metallographic microscope MIM-8M (MIM-8M). The authors describe the detection of the structural elements of grp: glass fiber, binding agent, lubricant, defects, and structure. The direction of the glass fibers and their diameter were determined next. The authors used two methods for determining the quantitative ratio of the main components of grp: a) the method of Razival' (linear method, which they consider to be time-consuming) and b) A. A. Glagolev's point method (Ref.1), which is explained. They studied grp which were subjected to expanding loads. They proved thereby that under the action of such pressure a destruction sets in before the breaking point is reached. Cracks in fibers occur under relatively low pressure. At elevated pressures, grooves appear on the polished section due to split or crumbled fibers. The number of destroyed fibers increases steadily with increasing load. The authors did not observe any interruption of cohesion between fibers and binding agent (resin) in the range of pressures

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APPROVED FOR RELEASE: 09/19/2001
Application of Microstructural Analysis for
Studying Glass-reinforced Plastics

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applied. Specimens that were elongated and compressed showed the fiber defects and cracks at the boundary of fiber and resin. The authors finally state that microstructural analysis is suitable for determining the type and mechanism of destruction of grp under the action of various factors. There are 24 figures, 1 table, and 2 Soviet references.

Card 3/3

43767

S/653/61/000/000/016/051
I007/I207

157510

AUTHORS: Kogan, A.M., Guterman, V.M., and Koshina, M.M.

TITLE: Microstructure analysis as one of the methods for studying the structure of glass-reinforced plastics

SOURCE: *Plastmassy v mashinostroyenii i priborostroyenii. Pervaya respublikanskaya nauchno-tekhnicheskaya konferentsiya po voprosam primeneniya plastmass v mashinostroyenii i priborostroyenii, Kiev, 1959. Kiev, Gostekhizdat, 1961, 192-205*

TEXT: Detailed results are reported of investigations carried out by UNIIPTUGLEMAsh on glass-reinforced plastics in order to find structural characteristics that would permit improved sampling inspection of finished plastics products, the design of new types of such products and of technological processes for their production. Investigations on polished microsections by means of metallurgical

Card 1/2

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I007/I207

Microstructure analysis...

microscopy, were conducted in the following direction: study of the basic structural elements of plastics, texture, mean fiber-diameter, and ratio between the basic structural components. In the research, two methods were applied: the linear method developed by Rasiwal and the point method devised by Glagolov. The microstructural analysis was also applied to study the action of tensile stresses and the effect of working pressure on structure. The results proved that microstructural analysis is a valuable tool in revealing the nature of failure of glass-reinforced plastics and may be used in the study of mechanism of failure under the action of loads, pressure, etc. There are 1 figure and 13 tables.

Card 2/2

GUTERMAN, V.I.; GAGARIN, I.Ye.; GAMOL'SKAYA, Z.I.; Priruchniy uchebnyy: ZILIKMAN, I.D.; TSYPIN, I.I.; KOL'NANSON, V.I.; KISELEVA, V.S.; LICHAYLOVSKAYA, S.S.; GRINBERG, A.Ya.; MARKIN, I.S.

Raising the wear resistance of equipment parts operating in a hydraulic abrasive medium. Ugol' 39 no.9:61-63 S '64. (IIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskoy institut ugol'nogo mashinostroyeniya.

GAMOL'SKAYA, Z.M.; GUTERMAN, V.M.; KOTINA, M.M.

Increasing the wear resistance of hydraulic machinery parts.
Metalloved. 1 term. obr. met. no.11:33-37 N '65.

(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskii institut ugol'nogo mashinostroyeniya.

ACC NR: AP6036885

(A)

SOURCE CODE: UR/0122/66/000/011/0041/0043

AUTHOR: Gamol'skaya, Z. M. (Engineer); Guterman, V. M. (Candidate of technical sciences)

ORG: none

TITLE: High wear resistance of case-hardened high chromium steels working in an abrasive hydraulic medium

SOURCE: Vestnik mashinostroyeniya, no. 11, 1966, 41-43

TOPIC TAGS: wear resistance, chromium steel, abrasive, case hardening

ABSTRACT: The article gives the results of an investigation of the wear resistance of case-hardened high chromium steels 3Kh13, Kh12M, and 9Kh18. The chemical composition of these steels and of two high chromium cast irons is given in a table. The samples were subjected to carburization at 1050°C (samples of steel 9Kh18 at 1070-1100°C) for a period of 10-15 hours in a solid charcoal carburizing agent consisting of 60 parts (by weight) of spent carburizing agent and 40 parts fresh carburizing agent, with the addition of 5% soda, as well as in a gaseous medium with the use of triethanolamine. The samples were then immediately quenched in oil from 950° and annealed at 160-180°C. The properties of the case are given in a table, and the microstructure is shown in a table. To evaluate the behavior of the materials under

Cord 1/2

UDC: 669.141.31:669.15'26-1947:620.162

ACC. NR: AP6036885

different conditions of hydraulic abrasion, tests were run by the following methods:
1) slot condensation--the samples were in the form of two concentric sleeves, of which the outer sleeve was fixed and the inner sleeve rotating; a slurry of water and sand flowed at a high rate between the sleeves; 2) samples in the form of cylindrical rods were placed in a vertical tube perpendicular to the flow of slurry; 3) samples in the form of plates were placed in a special unit and subjected to the periodic impact of a horizontal jet of a slurry of sand. It was found that the wear resistance of the case of a high chromium steel was 3-5 times greater than the wear resistance of a case obtained by the carburization of conventionally used steels. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 001

Card 2/2

1. GUTEROV, V. G., Engr.
2. USSR (600)
4. Steam Boilers
7. Measures for preventing water leaks in steam boilers.
Rab. energ. 2 No. 11, 1952

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

GUTENBERG, Iosif, inzh. SVERDLIN, V.M., inzh., SEVORTSOV, V.P., inzh.

Automation of load-carrying cableways at the Tynda-Auz
Combine. Gor. zhur. no.9:48-50 S '64. (MGBA 17:12)

1. Leningradskiy Institut Proyektavtomatika.

5
1953. An experiment on the treatment of dysentery with decoctions of alhagi. Kh. I. Guteris, N. A. Yincallov, I. A. Vashiev, P. N. Simanovskaya, and F. B. Maitell. *Izv. Akad. Nauk, Turkmen. S.S.R.*, 1955, No. 3, 73-77; *Referat. Zh. Biol.*, 1956, Abstr. No. 7938B. Twenty patients with acute dysentery were treated with a 6% autoclaved prep. of the plant alhagi (*Alhagi prunorum*) perorally, in a dose of 100 ml. 3 times a day for 6 days. At the same time the patient was given a course of 5 enemas of a prep. of *A. prunorum* (100 ml.) for 2-3 days. Normalisation of faecal ones and restoration of the morphological form of the affected part of the intestine was accelerated 14 times, compared with sulphonamide therapy, on treatment with the prep. (Russian) F. M. Kuchumov

GUTERTS, V. A.

PA 42/49T80

USSR/Petroleum
Refining
Power Plants

Mar 49

"Reconstruction and Expansion of the Power Base
of Petroleum Refining Plants," V. A. Guterts,
4 1/2 pp

"Energet Byui" No 3

Discusses necessity of planning efficient construction for petroleum refineries, and the power economy of the plant as a whole, thus permitting a systematically organized relationship between technologists and power engineers. Refers to the
42/49T80

USSR/Petroleum (Contd)

Mar 49

productive system and expansion and reconstruction of the power base of an operating plant in connection with the new development of thermal and electrical loading. Gives two tables of experimental results.

42/49T80

USSR/Engineering

Boilers
Fuel Conservation

May 49

"Experiment in Increasing the Rating of the Shukhova-Berlin A-7 Boiler," V. A. Guterts, 4 1/2 pp

"Energet Byul" No 5

PA 56/49T27
Describes proposal of L. V. Gardawdz chief engineer of an oil refinery plant, for reconstructing the existing boiler to increase the rating rather than to install auxiliary boilers. He also recommended other efficiency measures: better fuel use, increasing temperature of water supply (using exhaust steam

56/49T27

May 49

USSR/Engineering (Contd)

injected directly into the inlet water pipe), changing the steam atomization of the mazut to mechanical means, raising steam pressure, etc. Gives details of actual case incorporating above measures satisfactorily.

GUTERTS, V. A.

56/49T27

GUTERTS, V.A.

Floating electric power plant for offshore petroleum industries. *Energy*.
biul. no.6:1-5 Je '53. (MLA 6:6)
(Electric power plants) (Petroleum engineering)

GUTESCU, D.; ROSENAUER, I.; MIHAIESCU, A.

Measuring and representing the settlements at the Crisoara silo
for cereals. Bul St al Tehn Tim 9 no.1,251-263 Ja-Je '64.

GUTESOU, I.; ROSENBAUM, I.

Considerations on the measuring distances with the stadia rod.
Bul St si Tehn Tim 9 no.1:265-275 Jan-Ja '64.

GUTESA, Petar, Dr.

Present state of trauma in Serbia. Bibl.Hig.inst.Srbije no.5:
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1. Odeljenje za medicinu rada Higijenskog instituta NR Srbije.
(WOUNDS AND INJURIES, statistics,
in Yugosl.)

SAVICEVIC, M.; GUTESA, P.; PLAVSIC, P.

Lead poisoning and other diseases in plants with electric accumulators. Glasn. Hig. Inst., Beogr. 5 no.1-2:79-84
Jan-June 56.

(LEAD POISONING,

occup., in workers filling accumulators in electric plants (Ser))

(OCCUPATIONAL DISEASES,

lead pois. in workers filling accumulators in electric plants (Ser))

PAUNESCU, M., ing., MIHAIESCU, A., ing., GUTESCU, D., ing.
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Utilization of acicular filters and secant piles for the
construction of silo foundations. Rev constr si mat constr
15 no. 11: 580-585 N '63.

Regenerating lubricating oil used in automobile. . . 67

TRAKTORIST. Vol. 3, No. 1, 1966

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So. East European Acquisitions List Vol. 3, No. 2 September 1, 1966

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41-45 '63.

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GUTEVA, Ivanka

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1. 7-mo politekhn. u-shte "V. I. Lenin", Plovdiv.

GUTEVSKI, Naum

Sudden death in acute dilatation of the stomach. God.Zborn.
Med.Fak.Skopje no.10:205-210 '63.

1. Institut za sudska medicina i kriminalistiku -- medicinski
fakultet - Skopje (Direktor prof. d-r V. Bujan).

DOBŘÍ, Eduard, MUDr.; GUTFRUNDOVÁ, Eliška.

Activities of blood transfusion services during the recent 6 years. Česk. zdravot. 4 no.2:98-101 Mar. 1956.

1. Organizačně metodické oddělení Ústavu hematologie a krevní transfuze v Praze.
(BLOOD TRANSFUSION,
in Czech. (Cs))

~~SECRET~~ GUTFREYNDOVA, Ye.

DOBRYI, E.; FIYALO, Ya.; GUTFREYNDOVA, Ye.

Development and current trends in blood transfusion services in
Czechoslovakia. Probl.gemat. i perel.krovi 2 no.6:50-54 N-D '57.
(MIRA 11:2)

1. Iz Prazhskogo instituta gematologii i perelivaniya krovi (dir. -
doktor meditsinskikh nauk I.Kidery)
(BLOOD TRANSFUSION,
in Czech. (Rus.))

GUTTFREUNDOVA, E.
GUTTFREUNDOVA, E.; NOVAK, J.

Utilization of plasma-substitutes in various parts of Czechoslovakia
in 1954-56. Cesk. zdravot. 5 no.12:710-715 Dec 57.

1. Organizačne metodické oddeleni Ustavu hematologie a krevni transfuse.
(PLASMA SUBSTITUTES,
use in Czech., statist. (Cz))

NOVAK, Josef, MUDr.; DOBRY, Eduard; GUTFRUNDOVA, Erika

Use of transfusion preparations in 1957 & their planning. Cesk. zdravot.
6 no.12:703-707 Dec 58.

1. Ustav hematologie a krevni transfuze v Praze, reditel prof. MUDr. J.
Horejsi D Sc.

(BLOOD TRANSFUSION
in Czech. (Cz))

DOBRY, E., Mudr.; GUTFRUNDOVA, E.

Utilization of blood transfusion preparations during 1958.
Cesk. zdravot. 7 no.10:633-642 N '59

1. Ustav hematologie a krevni transfuze.
(BLOOD TRANSFUSION, statist.)

GUTGARTS, V.M., inzh.

Determining the cost of municipal engineering systems of
microdistricts. Vod. i san. tekhn. no.12:7-8 D '62.

(MIRA 15:12)

(Municipal engineering—Costs)

GUTGERTS, N.I.

Some problems of liqueur and vodka quality improvement. Spirt.prom.
20 no.4:12-13 '54. (MLRA 7:12)
(Distilling industries)

GUTGEZEL', R¹olf [Gutgesell, Rolf]

Introducing the new atomic weights in the teaching of chemistry.
Khim. v shkole 18 no.3:87 My-Je '63. (MIRA 16:9)
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"Standardization in Agriculture." p. 1301 (ZA SOCIALISTICKE ZEMEDELSTVI, Vol. 3, No. 11, Nov. 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.

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Standardization in agriculture. p. 3.

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SOURCE: East European Accessions List (EFAL), LC, Vol. 5, no. 3, March 1956

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Vol. 3, no. 2, Feb. 1954

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Praha, Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

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Responsibility in the development of technical standards. p. 49.

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SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

GUTH, M.

Tasks of agriculture and technical standardization. p. 130.

NORMALISACE. Praha. Vol. 3, no. 6, June 1954.

SOURCE: East European Accessions List (EAL), LC, Vol. 5, no. 3, March 1956.

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GUTH, M. Economic significance of the standards for measurement of losses. p. 152.

Vol. 4, no. 7, July 1955
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Praha, Czechoslovakia

So: East European Accessions, Vol. 5, no. 5, May 1956

GUTH, M.

Safety of work in forestry. p. 223.

Vol. 4, no. 10, Oct. 1955
NORMALISACE
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5 No. 4 April 1956

GUTH, M.

Protection of forests. p. 251.

Vol. 4, no. 11, Nov, 1955

NORMALISACE

Praha, Czechoslovakia

Soj Eastern European Accession Vol. 5 No. 4 April 1956

GUTH, M.

Development of the standardization of timber. p.27.
NORMALISACE, Prague, Vol. 5, no. 2, Feb. 1956.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956, Uncl.

GUCH, I.

Improving the documentation and information on patents and standards.

p. 13 (Vynalezy a Normalisace, Ochranné Znanky, Charanene Vazory. Vol. 1, no. 2, Aug. 1957. Praha, Czechoslovakia)

Monthly Index of East European Accessions (MEAI) Lc. Vol. 7, no. 2, February 1958

GUTH, N.

We took part at the All-Union Conference of Inventors, Rationalizers, and Innovators.

p. 5 (Vynalezy a Normalisace, Ochranné Znamky, Chronené Vzory. Vol. 1, no. 3,
Sept. 1957. Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

GUTH, M.

New state-wide organization of technical and economic information. p. 1.

VYNALEZY. (Urad pro patenty a vynalezy) Praha, Czechoslovakia. Vol. 3, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI), Vol. 9, no. 1, Jan. 1960

Uncl.

GUTH, Peter, dr.; HUDVARI, Robert, dr.

Agar gel diffusion and immune precipitation tests in the identification of blood stain in forensic medicine. Orv. hetil. 106 no.44: 2089-2090 31 0 ' 65.

1. Pecs Orvostudományi Egyetem, Igazságügyi Orvostani Intézet (igazgató: Budvari, Robert, dr.).

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Guth, Vladimir. Astronomie. (2. vyd.) Praha, Mal. Československé akademie věd, 1954. (Astronomy. 2d ed. illus., indexes, tables) Tbls. 1-2. 1954. 1111 p. MN

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"Studies on the cometary system of the comet Pons-Winnecke. Pt. I.
The secular perturbations of the comet, Pons-Winnecke."

p. 38 (Prace. Contributions, Vol. 2, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9,
September 1958

GUTH, V.; CELECHA, Z.

Meteor statistics. In English. p. 305

PUBLICATIONS. (Cekoslovenska akademie ved. Astronomicky ustav.) Praha, Czechoslovakia, No. 34/42, 1958.

Monthly List of East European Accessions (LEAI), LC, Vol. 8, no. 11, Nov. 1959
uncl.

GUTH, V

PHASE I BOOK EXPLITTATION

CZECH/5110

Hvězdářská ročenka 1961. (Astronomical Yearbook for 1961) Prague, NČAV, 1960.
205 p. 3,800 copies printed. (Series: Československá akademie věd.
Sekce matematicko-fyzikální, ročník 37)

Compilers: Jiří Bouška, Vladimír Guth and Bedřich Onderlička.

Sponsoring Agency: Československá akademie věd. Scientific Ed.: Josef M. Mohr,
Professor, Doctor; Reviewer: Vladimír Vanýsek, Doctor; Ed. of Publishing House:
Ladislav Hrdina..

PURPOSE: This book is intended for astronomers.

COVERAGE: The yearbook contains calendar data for the year 1961, ephemerides of
the sun, moon, planets, stars, and other celestial bodies, and other information
of interest to the astronomer. V. Guth composed parts A, B, D, and F; J. Bouška
assisted in the composition of part D, and composed parts C and E; B. Onderlička
wrote parts G and H; V. Ptáček compiled the list of monitored time signals, and
L. Webrová the table of zonal times. The following collaborated as indicated
on the composition of the chapter entitled "Review of Progress in Astronomy:
J. Bouška (Section 5), M. Kopecký (Section 3), L. Kresák (Section 6),

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Astronomical Yearbook for 1961

CZECH/5110

P. Mayer (Section 4), J. Ruprecht (Sections 7 - 11), L. Sehnal (Section 2), and L. Webrová (Section 1). J. Bouška wrote the "Explanation of the Astronomical Yearbook". There are no references.

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 EPR/ENT(j)/T-2/ENG(a)-2/ENT(h)/EPA(bb)-2/EEC(c)-2/EEB-2/ENG(c)/FCS(k)/ENT(b)/
 ARG/5110 PL-4/Pa-4/Pk-4/Pn-4/ BCCX EXPLOITATION pi-4/Ph-4/Pac-2/Ps-4/Pr-4/163
 Po-4/Pe-5/Pq-4/Pac-4/Pr-4 IJP(c) AST/TT/AM/DD/RM/GM/BC/EA 141
 Barvir, Mironlav, (Engineer); Benes, Konrad, (Professor, Doctor); Bouska, Jiri, (Doctor);
 Mull, Ivo, (Graduate in Philosophy); Cepicka, Zdenek, (Candidate of Physical and Mathematical Sciences);
 Codr, Milan, (Doctor); Dolezal, Vladimir, (Doctor); Dvorak, Antonin, (Candidate of Medical Sciences);
 Dvorak, Josef, (Doctor); Guth, Vladimir, (Candidate of Medical Sciences, Docent, Doctor); Horak, Zdenek,
 (Doctor of Physical and Mathematical Sciences, Corresponding Member of the Czechoslovak Academy of Sciences, Professor, Doctor); Horpodar, Jan, (Doctor of Physical and Mathematical Sciences, Doctor);
 Kleczek, Jozef, (Doctor); Klest, Emil, (Candidate of Physical and Mathematical Sciences); Kolodovsky, Milan; Korml, Vladimir (Doctor);
 Kopecky, Miloslav, (Candidate of Legal Sciences); Krivsky, Indislav, (Candidate of Physical and Mathematical Sciences);
 Kriz, Zdenek, (Candidate of Physical and Mathematical Sciences); Ledvina, Milan, (Engineer); Malcik, Vladimir, (Doctor);
 Moravek, Milan, (Candidate of Medical Sciences); Krazek, Jaroslav, (Candidate of Medical Sciences, Engineer);
 Krazek, Jiri, (Candidate of Technical Sciences); Neuzil, Iudek, (Doctor); Novotny, Zdenek, (Candidate of Physical and Mathematical Sciences);
 Novotny, Zdenek, (Doctor); Pernegr, Jaroslav, (Doctor); Candidate of Physical and Mathematical Sciences; Penek, Rudolf, Professor, Doctor, Engineer); Pipal, Miloslav, (Doctor of Technical Sciences, Corresponding member, of the Czechoslovak Academy of Sciences); Plavec, Miroslav, (Doctor); Pokorny, Zdenek, (Candidate of Physical and Mathematical Sciences, Docent, Doctor);

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Ruml, Vladimir, (Candidate of Medical Sciences, Doctor); Sadil, Josef, (Doctor of Physiological Sciences); Sehnal, Ladislav; Stverak, Jiri, (Doctor); Sventka, Zdenek, (Doctor); Tuma, Jaroslav, (Candidate of Physical and Mathematical Sciences, Doctor); Tyal, Vaclav, (Docent, Engineer); Uehla, Ivan, (Candidate of Technical Sciences, Professor, Doctor); Valnicek, Boris, (Candidate of Physical and Mathematical Sciences, Doctor); Vanysek, Vladimir, (Candidate of Physical and Mathematical Sciences, Docent, Doctor); Vlasak, Marian, (Candidate of Physical and Mathematical Sciences; Doctor); Voda, Miloslav, (Engineer)

Principles of astronautics (Zaklady kosmonautiky) Prague, Orbis, 1964. 445 p. illus., biblio. 5000 copies printed.

TOPIC TAGS: cosmonautics, rocket, satellite, space flight, missile 15

PURPOSE AND COVERAGE: This publication is a popular scientific reference book for people working in cosmonautics. The book presents a survey of cosmonautics and space flight up to 1 June 1963.

TABLE OF CONTENTS:

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GUTH, V.

Fifteenth Congress of the International Astronautical Federation,
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1. Astronomical Institute of the Czechoslovak Academy of
Sciences Ondrejov. Submitted October 12, 1964.

GUTHERC, B.

Organization and method of building steam-power plants in the Soviet Union.

p. 2 (Budownictwo Przemyslowe) Vol. 4, No. 11, Nov. 1955, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EFAI) LC, VOL. 7, NO. 1, JAN. 1958

GUTHERC, B.

GUTHERC, B. The organization and methods of construction of steam-power plants in the USSR. p. 2. BUDOWNICTWO PRZEMYSLOWE. Warszawa, Poland. Vol. 4, No. 11, Nov. 1955

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Vol. 9, No. 6, Nov./Dec. 1955

ENERGETYKA

TECHNOLOGY

Warszawa, Poland

So: East European Accession, Vol. 5, No. 5, May 1956

GUTHARC, I.

GUTHARC, E. Achievements in Polish power-engineering investments during
the last decade. p. 421.

Vol. 31, No. 7, July 1955
PRZGLAD ELEKTROTECHNICZNY
TECHNOLOGY
Poland

So: East European Accession, Vol. 5, No. 5, May 1956

P/021/60/000/010/001/005
A105/A026

AUTHOR: Gutherc, Borys, Master of Engineering

TITLE: Technical Progress in Electric Power Engineering

PERIODICAL: Przegląd Elektrotechniczny, 1960, No. 10, pp. 392 - 394

TEXT: The article deals with the development of thermal power plants since 1945. From 1945 to 1955, 80% of the increased power production was obtained by 25 - 55Mw turbine plants, 40% of which were 50 - 55 Mw turbine plants. Coal supply and ash removal were mechanized and high-speed reactors were installed for water precipitation. In 1950, the first heat generating power plant was built at Zeran. The second one in Łódź produces steam for textile plants. The number of power plants producing more than 100 Mw increased from 4 in 1949 to 8 in 1955. Among them a 300 Mw power plant in Jaworzno II, and a 220 Mw in Miechów were built. The average power produced by turbogenerators in 1950/55 was 27 Mw compared to 8.1 Mw in 1949. The own power consumption of the plants increased from 6.24% to 7.68%. The first heat supply for cities and plants started in 1950 by the 240 Mw, 720 goal/h Heat Supply Plant in Zeran. The average power of 27 Mw of heat supply plants built in 1950 - 1955 increased to 54 Mw of plants built from 1956 to 1960. ✓

Card 1/2

Technical Progress in Electric Power Engineering

P/021/60/000/C10/001/006
A105/A026

The capacity of the Blachownia Power Plant was increased to 70 Mw, 530/525°C and that of the Pomorzany Power Plant to 60 Mw, 525/525°C by coupling of the generators with reheated steam. The operating costs per 1 Mw were reduced by 10% in the recently completed Skawina and Konin II Power Plants, the coal consumption from 578 g/kwh in 1955 to 496 g/kwh in 1959, and the labor index from 6.5 Mw in 1955 to 3.6 Mw in 1960. The Five-Year Plan 1961 - 1965 provides for the construction of a 1,400 Mw lignite power plant in Turon equipped with 7 Soviet 200 Mw, 130 atm, 535/535°C turbogenerators; a 500 Mw lignite power plant in Adamov; and 700 Mw power plants in Siercza II and Lagisza. The capacity of the Konin Power Plant will be increased to 590 Mw. The Five-Year Plan 1966 - 1970 provides for the production of 20 turbogenerators of 200 Mw each. The steam temperature in power plants will be increased to 565°C (1,050°F). Pipelines, reheaters and turbines will be made of austenite steel in spite of the fact that Soviet power plants increased the steam temperature to 580/565°C using ferrite steel. ✓

Card 2/2

GUTHERC, Borys, mgr inz.

The GOERLO plan and its importance for the development of Soviet power engineering. Energetyka Pol 16 no.10:292-295 0 '62.

1. Dyrektor Departamentu Energetyki, Ministerstwo Gornictwa i Energetyki, Warszawa.

4

Modification of the optical method for studying phenomena in the precritical and critical regions of liquids. T. Gathner (Univ. Warsaw, Poland). *Bull. acad. polon. sci. Classe III*, 2, 147-8 (1954) (in English); cf. *C.A.* 47, 10301b.
—The capillary tubes in the app. previously described have been replaced with ones with square outside cross sections with or without a lens-shaped front. Charles M. Mason

BB

Jan

GUTIDZE, P. A., Candidate Tech Sci (diss) -- "The dynamic computation of foundations under turbogenerators in a linear direction". Tbilisi, 1959. 21 pp
(Min Higher Educ USSR, Order of Labor Red Banner Georgian Polytech Inst im S. M. Kirov), 200 copies (KL, No 25, 1959, 133)

GUTIDZE, P.A., kand.tekhn.nauk

Study of the causes of vibration in the engine building of a
hydroelectric power station. Gidr.stroi. 31 no.5:7-11 My '61.
(MIRA 14:6)

(Hydroelectric power stations) (Vibration)

S/169/63/000/002/054/127
D263/D307

AUTHOR: Gutidze, P. A.

TITLE: Calculation of inertial seismic forces acting on concrete buttressed dams with massive crossheads

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 19, abstract 2G128 (Izv. Tbilissk. n.-i. in-ta sooruzh. i gidroenerg., 1962, 14 (48), 138-146)

TEXT: A method is described for the determination of seismic forces acting on concrete buttressed dams. The problem of the natural oscillations of the construction is solved. Constructional and kinematic properties show that the calculation should allow for both transverse and longitudinal forces acting on the dam. When the buttresses are applied transversely to the dam, the calculation of the frequencies and the form of the oscillations should be carried out by considering the oscillations of the standing buttress separately. It may be represented as a wedge which is elastically or rigidly fixed to the base. Calculations of the natural oscillations

Card 1/2